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Relevance of Local Wisdom towards Efforts to Achieve Sustainable Food Sovereignty in Bangsal Village, Pampangan District, Ogan Komering Ilir Regency

Relevansi Kearifan Lokal terhadap Upaya Mewujudkan Kedaulatan Pangan Berkelanjutan di Desa Bangsal Kecamatan Pampangan Kabupaten Ogan Komering Ilir

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ABSTRAK

Penelitian ini bertujuan untuk menganalisis relevansi kearifan lokal terhadap upaya pencapaian kedaulatan pangan berkelanjutan di Desa Bangsal, Kecamatan Pampangan, Kabupaten Ogan Komering Ilir. Penelitian deskriptif eksploratif ini dilakukan di Desa Bangsal, Kecamatan Pampangan, Kabupaten Ogan Komering Ilir pada bulan Februari 2020. Data yang dikumpulkan berupa data primer dan data sekunder. Analisis menunjukkan bahwa lahan rawa rawa dikelola menjadi tiga bagian, yaitu peternakan kerbau, budidaya ikan rawa dan budidaya padi. Untuk peternakan kerbau, masyarakat menerapkan kearifan lokal sistem kalang (gembala), sedangkan untuk budidaya ikan menggunakan sistem perikanan tangkap (beje). Selanjutnya untuk budidaya padi terdiri dari beberapa tahapan dengan kearifan lokal yang digunakan, yaitu a) pengolahan tanah, menggunakan sistem rewang dan perarian, b) Pembibitan, menggunakan benih hasil panen terakhir, c) penanaman, pindah tanam, tanam jarak, atau penanaman langsung (tunjam) d) pemupukan, menggunakan gulma atau tanaman liar, e) memelihara, dengan kearifan lokal, menggunakan orang-orangan sawah dan plastik di sekitar lapangan, f) panen, gotong royong memotong padi dengan sabit (ngarit bersama), dan g) pasca panen, menjual hasil panen secara langsung atau menyimpannya sendiri. Hasil penelitian menunjukkan rerata 54,60 dari 7 indikator dan termasuk dalam kriteria tinggi. Disimpulkan bahwa ada relevansi yang signifikan antara kearifan lokal dengan upaya mewujudkan kedaulatan pangan yang berkelanjutan di Desa Bangsal.

Kata kunci: kedaulatan pangan, kearifan lokal

ABSTRACT

This study aimed at analyzing the relevance of local wisdom toward efforts in achieving sustainable food sovereignty in Bangsal Village, Pampangan District, Ogan Komering Ilir Regency. This exploratory descriptive study was conducted in Bangsal

Village, Pampangan District, Ogan Komering Ilir Regency in February 2020. Data collected were both of primary and secondary data. The analyses show that the swamp marshland was managed into three parts, i.e. buffalo husbandry, swamp fish farming and rice farming is provably more appropriate. For the buffalo husbandry, the community apply their local wisdom of kalang (shepherd) system. While for the fish farming, the capture fishery (*beje*) system was used. Furthermore, for rice cultivation, it consists of several stages with their respective local wisdom used, i.e. a) tillage, using *rewang* and *perarian* systems, b) Seeding, using seeds from their last harvest, c) planting, transplanting, spaced planting, or direct planting (*tunjam*) d) fertilizing, using weeds or wild plants, e) maintaining, with local wisdom, using scarecrow and plastic surrounding field, f) harvest, mutual cooperation in cutting the rice with sickle (*ngarit bersama*), and g) post-harvest, selling the harvest directly or self-storage. The results show mean of 54.60 from the 7 indicators and it was included in high criteria. It is concluded that there was a significant relevance between local wisdom and efforts to achieve sustainable food sovereignty in Bangsal Village.

Keywords: food sovereignty, local wisdom

INTRODUCTION

Swamp marshland is widely spread in Sumatra, Kalimantan and Papua with an area of 9.2 million hectares. It is one of the natural resources potential to be developed into agricultural areas (Mulyani & Sarwani, 2013). It can be used for the cultivation of food crops, horticulture or plantations. However, most of them are only widely used for food crops such as rice and maize. It is less optimal in terms of physical, chemical, and biological soil conditions. Therefore, its management requires ecological wisdom (Herlinda & Sandi, 2017).

Ecological wisdom has now developed into agricultural management local wisdom. It is the attitude and actions taken in managing agricultural land based on conditions and experience in resolving and adapting to the environmental conditions in that location. These attitudes or actions are generally having more wisdom and good values and are passed down for generation (Herlinda & Sandi, 2017). They can also be an alternative for farmers to realize a local food system to meet daily needs (Fadhilah, 2013). Food sovereignty is the concept of fulfilling the right to food that is of nutritional quality and culturally appropriate, produced with a sustainable and environmentally friendly agricultural

system. It upholds the principle of food diversification in accordance with existing local cultures. It is also the right to determine one's own agricultural and food system emphasizing more on family-based agriculture with solidarity foundation. Therefore, to meet the local food needs, the government the commitment in achieving food sovereignty in the country, as written in Law Number 18 of 2012 concerning food, which guarantees the right to food for the community and to determine their own agricultural and food systems in accordance to local resources potentials (Syahyuti et al., 2016). (SPI, 2014; Syahyuti et al., 2016).

Pampangan district is one of the districts in the Ogan Komering Ilir (OKI) Regency. It is \pm 42 km from the capital city of OKI Regency. This district has an area of 456.9 km² and consists of 21 villages. Bangsal Village, which is one of the villages located in the district. It has a population of approximately 152 families and an area of relatively 320 hectares. It is situated 11 km from the district capital. Most people there work as farmers, fishermen and buffalo breeders in Swamp marshland. The community use swamps to buffalo husbandry, swamp fish farming and rice farming. Some farmers in the village still apply local wisdoms in farming. Based on this situation, the objectives of this study was aimed at Analyzing the relevance of

local wisdom toward efforts to achieve sustainable food sovereignty in Bangsal Village, Pampangan District, Ogan Komering Ilir Regency.

MATERIALS AND METHODS

Local wisdom was a socio-cultural structure, that have been passed down from generation to generation, in the form of knowledge, norms, regulations and skills of people in an area to meet the common (life) needs. Local wisdom was the social capital developed by the community to create order and balance between the socio-cultural life of the community and the preservation of natural resources surrounding them. (Hidayati, 2017; Widayati et al., 2021; Alfian, 2018). The results of the study from Nugraha et al (2016); McMichael. (2014) show that the response of farmers to food sovereignty and food security tends to be vague and showed a non-complementary parallel relationship. Sovereignty can work best in conditions that respect the diversity of its sources. Food sovereignty has a tendency to strengthen the diversity of contexts, cultures, and choices of production methods as a real effort to reduce the impact of the corporate food regimes' domination toward the state's and farmers' attempts to ensure the fulfillment of people's rights to food.

Riski et al. (2016) in his research on local wisdom in shaping local food power states that local wisdom was manifested in the habits of the community (Molamahu Community Case) who have the same understanding of something both in material and in values or ideas. The Dayak people of Central Kalimantan hold the local wisdom in managing natural resources, i.e. (1) shifting cultivation, at secondary forest, partial tree cutting and regenerative culture, work in cooperation, and customary law regulated forests preservation (2) Tajahan, Kaleka, Sapan Pahewan, and Pukung Himba, were some concepts of conservation and protection of flora and fauna by the Dayak tribe, and (3) beje, to

reduce the danger of forest/peatland fires (Seran, 2020; St Laksono, 2019; Aritionang et al., 2015; Ibrahim & Yanti, 2019).

Forms of local wisdom can basically be categorized in the form of local agricultural systems, local food production techniques, local food production motives, patterns of processing and storing local food sources, as well as local-based food values or ideas playing role in constructing social resilience (Fadhilah, 2013). Furthermore, the roles and functions of local wisdom in building local culture and food security were as follows (Muttaqien et al., 2000; Fajarini, 2014; Sulistiyarto et al., 2012).

1. Aspects of food accessibility, including:
 - a). enabling an easier access for people to food sources since they were oriented towards local food sources, b).
2. Aspects of food availability, including:
 - a). the fulfillment of community food availability since it relies on its own production model of local food sources, b). Improvement of production relations among community members in the food procurement process of local food.
3. Aspects of food safety and quality, including:
 - a). ensuring chemical safe food that endanger humans, b). fostering public confidence in local food safe for consumption.
4. Food sustainability aspects, including:
 - a). safeguarding food sufficiency for the future founded on the independence of local food processing, b). securing food sustainability.

This study was conducted in Bangsal Village, Pampangan District, Ogan Komering Ilir Regency. The location of the study was determined purposively (purposive location sampling) considering that there were swamp marshland farmers who still applied local wisdom there in farming activities. It was carried out from February 2020 to completion. It was a descriptive exploratory study aiming at describing or explain something, for

example conditions, circumstances, situations, events, and activities. Descriptive research has the characteristic of describing something in accordance with the actual situation, while exploratory research targets at exploring broadly about the causes or things that affect the occurrence of something (Mudjiyanto, 2018). The sampling method used in this study was purposive sampling method. According to (Suliyanto & MM, 2017) Purposive Sampling was a sampling technique with certain considerations. This means that each subject taken from the population was chosen deliberately based on certain objectives and considerations. The objective and consideration in this study was that the sample has been farming for 15 years or more in swamp marshland. The total population of swamp marshland farmers in Bangsal Village was 240 people, and only about 140 people have been farming for 15 years or more. Therefore, the researchers decided that the sample taken in this study were 30 people.

RESULTS AND DISCUSSION

Swamp Buffalo Management in Swamp Marshland

The swamp buffalo was commonly known as Pampangan buffalo. The results from the questionnaire show 30 percent of the farmers raised swamp buffalo. The farmers keep them because they were considered a symbol of the family and they have been passed down from generation to generation to produce meat and milk. They will only sell the buffalos if they were in an extreme need of money for large expenses such as education or wedding. The maintenance of swamp buffalo was still carried out in a simple and traditional way, i.e. the *kalang* system that was letting them graze freely in swamps. Throughout the day, the buffalo were released by the breeders in groups, sometimes the breeders also take part in directing the buffalos to a swampy area with abundant grass. They were removed from the byre at dawn or at

sun rise and they will flock to the swamp marshland for grazing and will return to their cage at dusk or near sunset.

Fish Management in Swamp Marshland

Most of farmers in Bangsal Village also work as fishermen. Based on the results of the questionnaire, it was shown that 43 percent of the lowland swamp farmers in Bangsal Village. The swamp fish farming system in Bangsal Village was typically still done traditionally. Farmers still rely on the capture fishery system or commonly known as the *beje* system. This system was a fishing place or pond that naturally exists. In Bangsal Village, there were two types of *beje*.

The first type was a lake or pond in the form of a swamp basin. This basin was usually called *lebak lebung* which in this village was divided into two types, i.e. artificial and natural *lebak lebung*.

The second type was created from naturally occurring streams. Swamp marshland farmers fish freely in this area without requiring a permit. Customarily, the farmers fish in two ways. The first was by using a *penilal* (traditional bamboo tool which was put into the water and then left until it was filled with fish). This traditional tool was called a *bubu* in other area. The other way was by using other traditional tools such as *tangkal*, nets and fishing rods.

Management of Rice Plants in Lebak Swamp

The results of the study reveal that all respondents were swamp marshland farmers who cultivate rice. Rice cultivation was carried out once a year during the dry season or at low tide. They usually start planting in April or May with a four-month planting period. The Local wisdom in the management of swamp rice plants was seen from 7 stages, namely as follows.

1. Soil Processing, there were several local wisdoms carried out such as the *rewang*/rotating system and the *perarian*/mutual assistance system. Other than those, the farmers use the

- wage system or do the process on their own with the help of a tractor. In this study, it was revealed that 80 percent of farmers employ the *rewang* or *perarian* (mutual cooperation) system, 10 percent prefer to use the wage system and the rest work on their own with the help of a tractor.
2. Seeding, the local wisdom adopted is by preparing the seeds themselves. Whereas, the modern way was to buy IR seeds. In in this study it was indicated that 70 percent of farmers still use seeds from their own harvest. The remaining 30 percent purchase seeds at markets or farmer shops.
 3. Planting, the local wisdoms in this stage were transplanting, spaced planting, or direct planting. The results indicate that 70 percent of farmers directly planted the prepared seeds by cutting or making holes 2 cm deep, 20 percent utilize transplanting, and the remaining 10 percent apply the spaced planting method.
 4. Fertilization, the local wisdoms applied were by using weeds, wild plants, or unharvested decomposing rice plants. Based on the results of the questionnaire, it was shown that 37 percent of farmers apply this local wisdom in the fertilization process the reasons of employing this technique were (1) higher efficiency rate of weeds or wild plants as fertilizer, (2) and environmentally friendly, and (3) cost saving. The fertilization was done by only burying weeds, wild plants, or decomposing rice plants into the soil when the land was cleared. By contrast, the other 43 percent adopt the use of buffalo dung manure either purchased or self-made. The remaining 20 percent uses chemical fertilizers available on the market or farmer shops.
 5. Maintenance, the local Wisdom for repelling pests was by using scarecrows and plastic surrounding the rice fields. Based on the results of the questionnaire, it was described that 80 percent of farmers still use scarecrows or plastic surrounding the rice plant plots to repel birds or other pests. Differently, 20 percent of them used chemical pesticides.
 6. Harvest, the Local wisdom was practiced by mutual cooperation in cutting the rice with sickle (*ngarit bersama*). Based on the results of the questionnaire, 70 percent of farmers still perform the traditional method. Meanwhile, the other 30 percent pay other people to harvest their crops in which it was usually agreed upon a 10:1 profit sharing system. Additionally, there were also farmers who use tractor machines to harvest their crops.
 7. Post-Harvest, the Local wisdom was by selling the harvest directly to middlemen in the form of unhulled rice and by storing it themselves. Based on the results, 100% of the farmers practice the local wisdom. If the harvest was in large quantity, some will be sold, whereas if the harvest was small, the farmers will only store it for consumption.
- Food sovereignty at Bangsal Village was in the high criteria. It was because most farmers still apply local wisdom in cultivating their rice fields in swamp marshland. The relevance of local wisdom in achieving food sovereignty was described (Table 1). Based on Table 1, it was shown that sovereignty over the first indicator, i.e. cultivated land with *rewang*/rotating system and *perarian*/mutual cooperation is in high criteria. This denotes that food sovereignty when viewed from the sovereignty over cultivated land has been actualized through the existence of the existing local wisdom. Furthermore, Sovereignty over water resources with no employed local wisdom was in moderate criteria. This means that in this term, the food sovereignty has not been fully achieved. For the third indicator, i.e. seeds by using seeds from their own harvest is in high criteria.

Table 1. Relevance of local wisdom in achieving food sovereignty

Food Sovereignty Indicator	Criteria	Local Wisdom
Cultivated Land	High	Applying <i>rewang</i> /rotating system and the <i>perarian</i> /mutual assistance system
Water Resource	Medium	No local wisdom
Seed	High	using seeds from their own harvest
Fertilizer and Pesticide	High	using weeds, wild plants and not using pesticides.
Agricultural System (<i>Repel Pests</i>)	High	using scarecrows and plastic surrounding the rice
Yield	High	selling the harvest directly to middlemen in the form of unhulled rice and by storing it themselves
Consumption Food	High	some were sold, and the rest were for consumption.

Source: Primary data analysis, 2020

This means that the wisdom can help farmers to choose any seeds to from their own production and do not depend on the market. Therefore, the sovereignty over seeds has been realized here. For the fourth indicator, i.e. fertilizers and pesticides by using natural fertilizers derived from weeds or wild plants and by not using pesticides. The farmers think that if they use weeds or wild plants the soil will be more fertile, more environmentally friendly and save on fertilizer costs. Sovereignty over fertilizers and pesticides is in high criteria. This means that local wisdom embodies food sovereignty as seen from the sovereignty of natural fertilizers and pesticides. It is because the farmers' need for natural fertilizers is guaranteed with chemical free and environmentally friendly fertilizers.

For fifth indicator, i.e. the agricultural system by using traditional tools such as hoes, axes, sickles, machetes, and buffalo in their cultivation activities. In addition, farmers also use scarecrows and plastics surrounding the rice fields to repel pests from crops, one of which is birds. Sovereignty over this indicator is in high criteria which indicates that local wisdom has manifested food sovereignty as seen from the sovereignty over agricultural system.

In terms of sovereignty over the sixth indicator, i.e. the results of production by selling directly to middlemen and by self-storage is in high criteria. This shows that sovereignty over this indicator has been

realized by the existence of local wisdom. This is because local wisdom can help farmers to maintain friendship with buyers. In addition, farmers can also meet their own food needs and with no need to buy from the market.

On sovereignty over the last indicator, that is consumption food by selling the harvest partially and storing the rest is in high criteria. This signifies that with this local wisdom, besides being able to earn money, farmers can also fulfill their own food needs. This shows that sovereignty over consumption food in Bangsal was achieved. Based on the description above, it is concluded that there is a significant relevance between local wisdom and efforts to achieve sustainable food sovereignty in Bangsal Village. It is achieved due to years of practice of the local wisdoms in Bangsal Village. Their existence can help farmers fulfilling the right to nutritious food and suited to their culture by employing an environmentally friendly agricultural system which will continue into the future.

CONCLUSION

The swamp marshland was managed into three parts, i.e. buffalo husbandry, swamp fish farming and rice cultivation. The local wisdom-based Management at Bangsal Village are *Kalang* System for buffalo husbandry and capture fishery system or *beje* system for fish farming. Where as for rice cultivation, there are several stages with

their own local wisdom based activity, i.e. a) Soil processing, with the *rewang/perariran* system; b) Seeding, by using seeds from their own harvest; c) Planting, by transplanting, spaced planting and directly planting (*tunjam*); d) Fertilization, by using weeds or wild plants; e) Plant maintenance; by employing scarecrows and plastics surrounding the rice fields to repel pests; f) Harvesting, by means mutual cooperation in cutting the rice using sickle (*ngarit bersama*); and g) Post-harvest, by selling the harvest directly or self-storage. The level of food sovereignty in the Ward Village is in the high category, denoting that the village has achieved food sovereignty. Finally, it is concluded that the relevance of local wisdom is significant toward the realization of sustainable food sovereignty in Bangsal Village.

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